





022913

PATENT TRADEMARK OFFICE

of WORKMAN, NYDEGGER & SEELEY, 1000 Eagle Gate Tower, 60 East South Temple, Salt Lake City, Utah 84111, as attorneys with full power of substitution and revocation, to prosecute said application, to make alterations and amendments therein, to receive the Letters Patent, and to transact all business in the Patent and Trademark Office connected therewith. The declarant further declares that all statements made herein of his own knowledge are true; and further that these statements were made with the knowledge that willful, false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful, false statements may jeopardize the validity of the application or any patent issuing thereon. All correspondence and telephonic communications should be directed to:

ADRIAN J. LEE  
WORKMAN, NYDEGGER & SEELEY  
1000 Eagle Gate Tower  
60 East South Temple  
Salt Lake City, Utah 84111

All previous powers of attorney are hereby revoked.

Signed this 30 day of September, 2002.

*Yoshitaro Shimanuki*

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Yoshitaro Shimanuki  
Intellectual Property Executive Manager  
NTT DoCoMo, Inc.  
11-1, Nagatacho 2-Chome  
Chiyoda-Ku  
Tokyo 100-6150, Japan





Dated this 25th day of October, 2002.

Respectfully submitted,



ADRIAN J. LEE  
Attorney for Applicant  
Registration No. 42,785



**022913**

PATENT TRADEMARK OFFICE



APRIL 23, 2001



UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office  
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OCT 30 2002

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BROWN RAYSMAN MILLSTEIN FELDER & STEINER  
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UNITED STATES PATENT AND TRADEMARK OFFICE  
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

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PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 12/01/2000

REEL/FRAME: 011499/0223  
NUMBER OF PAGES: 3

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

OKUMURA, YUKIHIKO

DOC DATE: 11/22/2000

ASSIGNOR:

ANDO, HIDEHIRO

DOC DATE: 11/22/2000

ASSIGNOR:

USUDA, MASAFUMI

DOC DATE: 11/22/2000

ASSIGNOR:

ISHIKAWA, YOSHIHIRO

DOC DATE: 11/22/2000

ASSIGNOR:

ONOE, SEIZO

DOC DATE: 11/22/2000

ASSIGNEE:

NTT DOCOMO, INC.  
11-1, NAGATACHO 2-CHOME  
CHIYODA-KU, TOKYO 100-6150, JAPAN

RECORDS UPDATED  
04/27/01 Fe

011499/0223 PAGE 2

SERIAL NUMBER: 09701705  
PATENT NUMBER:

FILING DATE: 12/01/2000  
ISSUE DATE:

JEFFREY OLSEN, EXAMINER  
ASSIGNMENT DIVISION  
OFFICE OF PUBLIC RECORDS

## ASSIGNMENT

WHEREAS, we, Yukihiro OKUMURA, a citizen of Japan, residing at 9-2-3-405, Sugita, Isogo-ku, Yokohama-shi, Kanagawa 235-0033, Japan; Hidehiro ANDO, a citizen of Japan, residing at 3-16-5-101, Serigaya, Konan-ku, Yokohama-shi, Kanagawa 233-0006, Japan; Masafumi USUDA, a citizen of Japan, residing at 18-11-102, Noukendaideri, Kanazawa-ku, Yokohama-shi, Kanagawa 236-0053, Japan; Yoshihiro ISHIKAWA, a citizen of Japan, residing at 4-18-4-503, Nobi, Yokosuka-shi, Kanagawa 239-0841, Japan and Seizo ONOE, a citizen of Japan, residing at 1974-21, Mutsuura-cho, Kanazawa-ku, Yokohama-shi, Kanagawa 236-0032, Japan have invented one or more inventions disclosed in an application for Letters Patent of the United States titled

**CHANNEL ESTIMATION DEVICE AND METHOD, DEMODULATION DEVICE AND METHOD, AND FADING FREQUENCY DECISION DEVICE AND METHOD**

(hereinafter referred to as "said application"), said application having been filed herewith.

WHEREAS, NTT DoCoMo, Inc., (hereinafter referred to as "the Assignee"), a Japanese corporation, having a place of business at 11-1, Nagatacho 2-chome, Chiyoda-ku, Tokyo 100-6150, Japan; is desirous of obtaining all right, title and interest in, to and under said invention(s) and said application; and

NOW, THEREFORE, for good and valuable considerations, the receipt and sufficiency of which we hereby acknowledge, we have sold, assigned, transferred and set over, and by these presents hereby sell, assign, transfer and set over to the Assignee all right, title and interest in, to and under said invention(s) and said application, including the right to apply for any Letters Patent of the United States of America and in any and all foreign countries on said invention(s), and any and all other applications for Letters Patent on said invention(s), in whatsoever countries, including all divisional, renewal, substitute, continuation, continuation-in-part and convention applications based in whole or in part upon said invention(s) or upon said application, and any and all Letters Patent which may issue thereon. We hereby covenant and agree that we will, upon request of the Assignee, communicate to the Assignee any facts known to us relating to said invention(s) and the history thereof, testify in any legal proceeding, execute all lawful papers including without limitation all divisional, continuing and reissue applications and all rightful oaths and declarations, and generally do all further acts which may be deemed necessary by the Assignee to obtain and enforce proper patent protection for said invention(s) in all countries.

IN TESTIMONY WHEREOF, we have executed this document on the date indicated below.



Date: November 22, 2000



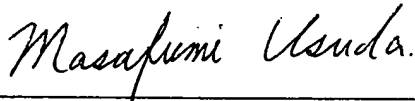
(Signature) Yukihiro OKUMURA

Date: November 22, 2000



(Signature) Hidehiro ANDO

Date: November 22, 2000



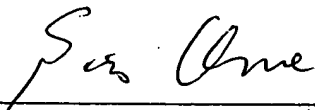
(Signature) Masafumi USUDA

Date: November 22, 2000



(Signature) Yoshihiro ISHIKAWA

Date: November 22, 2000



(Signature) Seizo ONOE

12-1-00

02-12-2001



09/701705  
528 R... PCT/PTO 01 DEC 2000  
Attorney Docket No. 3815107

101611357  
RM COVER  
PATENTS ONLY

To the Honorable Commissioner of Patents and Trademarks. Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):  
Yukihiko OKUMURA, Hidehiro ANDO, Masafumi USUDA, Yoshihiro ISHIKAWA and Seizo ONOE  
Additional name(s) of conveying party(ies) attached?  Yes  No

2. Name and address of receiving party(ies):  
Name: NTT DOCOMO, INC.  
Internal Address: 11-1, Nagatacho 2-chome, Chiyoda-ku, Tokyo 100-6150, Japan  
Street Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ ZIP: \_\_\_\_\_  
Additional name(s) & address(es) attached?  Yes  No

3. Nature of conveyance:  
 Assignment  Merger  
 Security Agreement  Change of Name  
 Other \_\_\_\_\_  
Execution Date: November 22, 2000

4. Application number(s) or patent number(s) 09/701705  
If this document is being filed together with a new application, the execution date of the application is: \_\_\_\_\_  
A. Patent Application No.(s) \_\_\_\_\_ B. Patent No.(s) \_\_\_\_\_  
Additional numbers attached?  Yes  No

5. Name and address of party to whom correspondence concerning document should be mailed:  
BROWN RAYSMAN MILLSTEIN FELDER & STEINER LLP  
120 West 45th Street  
New York, New York 10036  
(212) 944-1515  
ERIHANDO 00000102 024270 09701705  
40.00 CH

6. Total number of applications and patents involved: 1  
7. Total fee (37 CFR 3.41):..... \$ 40.00  
 Check enclosed  
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9. Statement and signature.  
*To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.*

Matthew J. Marquardt  
Name of Person Signing

Signature

1 DEC 2000 ZJJ  
Date

Total number of pages including cover sheet, attachments and document: 3

Mail documents to be recorded with required cover sheet information to:  
Commissioner of Patents and Trademarks  
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Washington, D.C. 20231

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PATENT APPLICATION

Docket No: 15689.61



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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OCT 30 2002

Technology Center 2600

application of

Yukihiko OKUMURA et al.

Serial No.: 09/701,705

) Art Unit  
) 2661

Filing Date: December 1, 2000

Confirmation No.: 7195

For: CHANNEL ESTIMATION DEVICE AND  
METHOD, DEMODULATION DEVICE AND  
METHOD, AND FADING FREQUENCY  
DECISION DEVICE AND METHOD

CHANGE OF ATTORNEY DOCKET NUMBER

Honorable Commissioner of Patents  
and Trademarks  
Washington, D. C. 20231

Sir:

For convenience and ready identification of the papers received in connection with the above-identified patent application, please reference in all future communications my Docket No. 15689.61. All communications should remain addressed to the undersigned:

ADRIAN J. LEE  
WORKMAN, NYDEGGER & SEELEY  
1000 Eagle Gate Tower  
60 East South Temple  
Salt Lake City, Utah 84111  
(801) 533-9800

Dated this 25th day of October, 2002.

Respectfully submitted,



ADRIAN J. LEE  
Attorney for Applicant  
Registration No. 42,785



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AJL:jrij